What Is Claimed Is:

1. A projection type image display apparatus, comprising:

a light source;

an illumination optical system;

a reflection image display device;

a projection lens;

a reflection polarizing plate which is located just before/after said reflection image display device in light path, and has function as polarizer and analyzer for said reflection image display device by diffraction,; and

either of an auxiliary polarizer which is located between said light source and said reflection polarizing plate in a light path and an auxiliary analyzer as an absorption polarizing plate which functions as an analyzer located between said reflection polarizing plate and said projection lens in said light path;

wherein an image light reflected by said reflection image display device is irradiated on a working plane side of said reflection polarizing plate, and then reaches said projection lens after reflecting on said reflection polarizing plate.

2. A projection type image display apparatus as defined in Claim 1,

wherein a reflection axis of said reflection image display device is rotated at a predetermined angle based

on a polarization characteristic of said reflection image display device.

3. A projection type image display apparatus as defined in Claim 2,

further comprising an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate.

4. A projection type image display apparatus as defined in Claim 3,

further comprising an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis.

5. A projection type image display apparatus as defined in Claim 3,

wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing plate, by a second predetermined angle based on a characteristic of said reflection image display device.

6. A projection type image display apparatus as defined in

Claim 1,

further comprising an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate.

7. A projection type image display apparatus as defined in Claim 6,

further comprising an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis.

8. A projection type image display apparatus as defined in Claim 6,

wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing plate, by a second predetermined angle based on a characteristic of said reflection image display device.

9. A projection type image display apparatus, comprising:

a light source;

an illumination optical system;

a reflection image display device;

a projection lens;

a reflection polarizing prizm incorporating a reflection polarizing plate which functions as a polarizing plate by diffraction; and

either of an auxiliary polarizer which is located between said light source and said reflection polarizing prizm in a light path and an auxiliary analyzer as an absorption polarizing plate which functions as an analyzer located between said reflection polarizing prizm and said projection lens in said light path;

wherein said reflection polarizing prizm is located just before/after said reflection image display device.

10. A projection type image display apparatus as defined in Claim 9,

wherein a reflection axis of said reflection image display device is rotated at a predetermined angle based on a polarization characteristic of said reflection image display device.

11. A projection type image display apparatus as defined in Claim 10,

further comprising an adjustment mechanism which adjusts a reflection axis of said reflection polarizing prizm.

12. A projection type image display apparatus as defined in Claim 11,

further comprising an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis.

13. A projection type image display apparatus as defined in Claim 11,

wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing plate, by a second predetermined angle based on a characteristic of said reflection image display device.

14. A projection type image display apparatus as defined in Claim 9,

further comprising an adjustment mechanism which adjusts a reflection axis of said reflection polarizing prizm.

15. A projection type image display apparatus as defined in Claim 14,

further comprising an adjustment mechanism which rotates at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer around an optical axis.

16. A projection type image display apparatus as defined in Claim 14,

wherein at least one of an absorption or reflection axis of said auxiliary polarizer and an absorption axis of said auxiliary analyzer is rotated around an optical axis in a way to decrease an angle difference from a reflection axis of said reflection polarizing prizm, by a second predetermined angle based on a characteristic of said reflection image display device.

17. A projection type image display apparatus comprising a light source, an illumination optical system, a reflection image display device, and a projection lens,

wherein said apparatus comprises a polarization converter which polarizes light from the light source in a specific direction and emits it as such and;

as polarizers/analyzers for the reflection image display device,

a reflection polarizing plate or reflection polarizing prism which functions as a polarizing plate by diffraction; and

at least either of an auxiliary polarizer which is located between said light source and said reflection polarizing plate or reflection polarizing prism in a light path and an auxiliary analyzer as an absorption polarizing plate which functions as an analyzer located between said

reflection polarizing plate or reflection polarizing prism and said projection lens in the light path, and wherein

when the contrast ratio of said polarization converter is expressed by A, that of said auxiliary polarizer by B, that of said auxiliary analyzer by D, a transmission contrast ratio and reflection contrast ratio of said reflection polarizing plate or prism by C and E, respectively,

in a structure where reflected rays from said reflection image display device are reflected by said reflection polarizing plate or prism before reaching the projection lens, a following relation holds: A*B*C = (0.5-5)*D*E, and

in a structure where reflected rays from said reflection image display device pass through said reflection polarizing plate or prism before reaching the projection lens, a following relation holds: A*B*E = (0.5-5)*D*C.

18. A projection type image display apparatus as defined in Claim 17,

wherein a reflection axis of said reflection image display device is rotated at a predetermined angle based on a polarization characteristic of said reflection image display device.

19. A projection type image display apparatus as defined in Claim 18,

further comprising an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate

or said reflection polarizing prizm.

20. A projection type image display apparatus as defined in Claim 17,

further comprising an adjustment mechanism which adjusts a reflection axis of said reflection polarizing plate or said reflection polarizing prizm.